



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/713,538

11/14/2003

Roberto Bez

2110-62-3

7956

7590

02/10/2005

GRAYBEAL JACKSON HALEY LLP

Suite. 350

155-108th Avenue N.E.

Bellevue, WA 98004-5973

EXAMINER

SMITH, BRADLEY

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,538

Applicant(s)

BEZ ET AL.

Examiner

Bradley K. Smith

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 and 40-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: search notes.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group II (claims 19-39) in the reply filed on 11/12/04 is acknowledged. The traversal is on the ground(s) that claim 45 is generic to all claims and that the search would not require a serious burden. This is not found persuasive because claim 45 is generic to all species in group I and it would be a burden to the examiner to examine to independent and distinct inventions because the device could be made by another method.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, with regards to claim 21, 26-39, the active area extending laterally inside one of said recesses (claim 21) or the first conductor disposed in the recess (claims 26-39) (The recess is understood to

mean in the substrate (21). Currently the drawings show the active area extending into the protrusion) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Self aligned devices with Isolation structures .

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 21, 26-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically "the active area extending laterally inside one of said recesses" (claim 21) or "the first conductor disposed in the recess" (claims 26-39) the recess is understood to mean in the substrate (21). Currently the drawings show the active area or the conductor above the substrate (21).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 19, 23-25, 34, 37, and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US Pregrant Publication 2003/0006476). Chen et al.

disclose a semiconductor body having a substrate (200), and a plurality of insulation structures (102) delimiting active areas and having respective portions projecting from said substrate, wherein said insulation structures have respective recesses, which accommodate at least partially conductive regions (see figure 1). With regards to claim 23, Chen et al. disclose the conductive regions entirely accommodated within the respective recesses (figure 1). With regards to claims 24, 25, 37 and 38, Chen et al. disclose the formation of resistors and capacitors (paragraph 0012).

9. Claims 19-22, 26-36 and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. (US Pregrant Publication 2003/0153148). Chang et al. disclose a semiconductor body having a substrate (200), and a plurality of insulation structures (208a) delimiting active areas and having respective portions projecting from said substrate, wherein said insulation structures have respective recesses, which accommodate at least partially conductive regions (figure 8a). With regards to claim 20, Chang et al. disclose the recesses are defined laterally with respect to respective projecting portions of said insulation structures (see figure 4). With regards to claim 21, Chang et al. disclose the conductive regions comprise terminals of memory cells arranged on top of respective said active areas and extending laterally inside at least one of said recesses (figure 8). With regards to claim 22, Chang et al. disclose the recesses are defined centrally with respect to respective said projecting portions of said insulation structures (figure 8). With regards to claims 26 and 34, Chang et al. disclose a substrate having an active region', first and second insulators (202) disposed adjacent to the active region (204) and defining a recess over a portion of the active region and

over a portion of one of the insulators and a first conductor disposed in the recess (210a) (see figure 8). With regards to claims 27 and 35, Chang et al. disclose first and second insulator projections define the recess (206) (see figure 4). With regards to claims 28 and 36, Chang et al. disclose first and second trenches disposed in the substrate, and wherein the first and second insulators are respectively disposed in the first and second trenches (see figure 8). With regards to claim 29, Chang et al. disclose the first and second insulators define the recess over respective portions of both the first and second insulators (see figure 8). With regards to claim 30, Chang et al. disclose a third insulator (202) over the active part of the substrate (see figure 8). With regards to claim 31 and 32, Chang et al. disclose the conductor (204) is a floating gate and is part of a memory cell (see figure 8). With regards to claim 33 and 39, Chang et al. disclose a third insulator (214) disposed on the first conductor, and a second conductor (216) disposed on the third insulator and overlapping the first conductor (see figure 8).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley K. Smith whose telephone number is (571) 272-1884. The examiner can normally be reached on 10-6 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2824

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'B. Smith'.

Brad Smith
Primary Examiner
Art Unit 2829